Service Manual

Model #: VIZIO GV47L FHDTV10A

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FCC INFORMATION
This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause unacceptable interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures -- reorient or relocate the receiving antenna; increase the separation between equipment and receiver; or connect the into an outlet on a circuit different from that to which the receiver is connected.

FCC WARNING
To assure continued FCC compliance, the user must use a grounded power supply cord and the provided shielded video interface cable with bonded ferrite cores. Also, any unauthorized changes or modifications to Amtrak products will void the user’s authority to operate this device. Thus VINC Will not be held responsible for the product and its safety.

CE CERTIFICATION
This device complies with the requirements of the EEC directive 89/336/EEC with regard to “Electromagnetic compatibility.”

SAFETY CAUTION
Use a power cable that is properly grounded. Always use the AC cords as follows – USA (UL); Canada (CSA); Germany (VDE); Switzerland (SEV); Britain (BASEC/BS); Japan (Electric Appliance Control Act); or an AC cord that meets the local safety standards.

Chapter 1 Features

1. High resolution 1920 x 1080 with wide screen.

2. Built-in digital HDTV and standard TV combination TV tuner.

3. All TV formats supported (1080i, 720p, 480 p and 480i).

4. Computer Monitor (RGB): up to1360 x 768 (H x V).

5. Wall mounting capable with and without speakers.

6. 2.1 virtual surround sound with 20W subwoofer.

7. Dual HDMI (High Definition Multimedia Interface).

8. Independent Red, Green and Blue adjustment in TV, Video, HDMI and VGA for user fine tuning of color temperature with reset.

9. Power saving to reduce consumption power to less than 3W.

10. Zero Bright Pixel.

11. PIP, POP, CC, V-Chip, 3D Comb Filter, Zoom, Freeze, 3:2 Reverse Pull-down, ATSC, with 8VSB & QAM demodulation, with MPEG-2 decoding, NTSC Video decoding via RF (Antenna, Cable or Satellite) or Video (CVBS, S-Video or Component), Progressive Scan Video via Component YPbPr, VGA or HDMI, HDTV via HDMI or Component YPbPr,

Chapter 2 Specification

1. TFT-LCD CHARACTERISTICS

Type: 47.0” WUXGA TFT LCD

Size: 47 inch

Display Size: 46.96” diagonal

Outline Dimension: 1096 mm (H) x 640 mm (V) x 51 mm (D) (Typ.)

Pixel Pitch: 0.5415mm (H) x 0.5415mm (V)

Pixel Format: 1920 horiz. By 1080 vert. Pixels RGB strip arrangement

Contrast ratio: 800:1(Typ.), 1,600:1 with DCR

Luminance, White: 500 cd/m2 (Typ.)

Display Operating Mode: normally Black

Surface Treatment: Hard Coating (3H), Anti-glare treatment of the front polarizer.

2. OPTICAL CHARACTERISTICS

Viewing Angle (CR>10)

Left: 89°typ.

Right: 89°typ.

Top: 89°typ.

Bottom: 89°typ.

3. SIGNAL (Refer to the Timing Chart)

Sync Signal

1) Type: LVDS

2) Input Voltage Level: 100~240 Vac, 50/ 60 Hz

4. Input Connectors

RJ11, D-SUB15PIN (MINI, 3rows), Headphone, HDMIX2, RCAX2 (component), RCAX2 (AUDIO in), RCAX2 (composite), RCAX2 (AUDIO in), S-Video, Tuner

5. POWER SUPPLY

Power Consumption: 400W MAX

Power OFF: 3W MAX

6.Speaker

Output 10W (max) X2, Sub woofer 20W X1

7. ENVIRONMENT

7-1. Operating Temperature: 0c~35c (Ambient)

7-2. Operating Humidity: Ta= 35 °C, 90%RH (Non-condensing)

7-3. Operating Altitude: 0 - 14,000 feet (4267.2m)(Non-Operating)

8. DIMENSIONS (Physical dimension)

Width: 1131 mm.

Depth: 270 mm

Height: 798 mm

9. WEIGHT (Physical weight)

a. Net: 40.3 +/-0.5kgs

b. Gross: 47.3+/-0.5kgs

9-1. MOUNTING PRECAUTIONS

(1) You must mount a module using holes arranged in four corners or four sides.

(2) You should consider the mounting structure so that uneven force (ex. Twisted stress) is not applied to the module. And the case on which a module is mounted should have sufficient strength so that external force is not transmitted directly to the module.

(3) Please attach the surface transparent protective plate to the surface in order to protect the polarizer. Transparent protective plate should have sufficient strength in order to the resist external force.

(4) You should adopt radiation structure to satisfy the temperature specification.

(5) Acetic acid type and chlorine type materials for the cover case are not desirable because the former generates corrosive gas of attacking the polarizer at high temperature and the latter causes circuit break by electro-chemical reaction.

(6) Do not touch, push or rub the exposed polarizes with glass, tweezers or anything harder than HB pencil lead. And please do not rub with dust clothes with chemical treatment.
Do not touch the surface of polarizer for bare hand or greasy cloth.(Some cosmetics are detrimental to the polarizer.)

(7) When the surface becomes dusty, please wipe gently with absorbent cotton or other soft materials like chamois soaks with petroleum benzene. Normal-hexane is recommended for cleaning the adhesives used to attach front / rear polarizers. Do not use acetone, toluene and alcohol because they cause chemical damage to the polarizer.

(8) Wipe off saliva or water drops as soon as possible. Their long time contact with polarizer causes deformations and color fading.

(9) Do not open the case because inside circuits do not have sufficient strength.

9-2. OPERATING PRECAUTIONS

(1) The spike noise causes the mis-operation of circuits. It should be lower than following voltage : V=±200mV(Over and under shoot voltage)

(2) Response time depends on the temperature. (In lower temperature, it becomes longer.)

(3) Brightness depends on the temperature. (In lower temperature, it becomes lower.)And in lower temperature, response time (required time that brightness is stable after turned on) becomes longer.

(4) Be careful for condensation at sudden temperature change. Condensation makes damage to polarizer or electrical contacted parts. And after fading condensation, smear or spot will occur.

(5) When fixed patterns are displayed for a long time, remnant image is likely to occur.

(6) Module has high frequency circuits. System manufacturers shall do sufficient suppression to the electromagnetic interference. Grounding and shielding methods may be important to minimize the interference.

9-3. HANDLING PRECAUTIONS FOR PROTECTION

(1) The protection film is attached to the bezel with a small masking tape. When the protection film is peeled off, static electricity is generated between the film and polarizer. This should be peeled off slowly and carefully by people who are electrically grounded and with well ion-blown equipment or in such a condition, etc.

(2) When the module with protection film attached is stored for a long time, sometimes there remains a very small amount of glue still on the bezel after the protection film is peeled off.

(3) You can remove the glue easily. When the glue remains on the bezel surface or its vestige is recognized, please wipe them off with absorbent cotton waste or other soft material like chamois soaked with normal-hexane.

Chapter 3 On Screen Display

Main unit button

POWER

SOURCE

CH +

CH -

VOL +

VOL -

MENU

TV Source

A. Picture Adjust：

a. Picture Mode (Standard/Movie /Game /Custom)

b. Backlight (0~100)

c. Contrast (0~100)

d. Brightness (0~100)

e. Color (saturation)(0~100)

f. Tint (hue) (0~100)

g. Sharpness (0~7)

h. Color Temperature (Cool/Normal/Warm/Custom)

i. Advanced Picture Adjust

B. Audio Adjust：

a. Volume (0~100)

b. Bass (0~100)

c. Treble (0~100)

d. Balance (-50~+50)

e. Surround (ON/OFF)

f. Speakers (ON/OFF)

C. Special Features：

a. Language (English/Français/Espaňol)

b. Sleep Timer (OFF/30Min/60Min/90Min/120Min)

c. Analog CC (OFF/CC1~4/TT1~4)

d. Digital CC (OFF/CC1~4/Service1~6)

e. Digital CC Style

f. PIP Position (TL/TC/TR/ML/MR/BL/BC/BR)

g. Rest All Settings

D. TV Tuner Setup：

a. Tuner Mode (Cable/Air)

b. Auto Search

c. Skip Channel

d. Digital Audio Out (PCM/Dolby Digital)

e. Time Zone
(Eastern/Indiana/Central/Mountain/Arizona/Pacific/Alaska/Hawaii)

f. Daylight Saving (ON/OFF)

E. Parental Control：

a. Parental Lock Enable (ON/OFF)

b. TV Rating

c. Movie Rating

d. Block Unrated TV (NO/YES)

e. Access Code Edit

RGB Mode

A. Picture Adjust：

a. Auto Adjust

b. Backlight (0~100)

c. Contrast (0~100)

d. Brightness (0~100)

e. Color Temperature (9300/6500/Custom)

f. H-Size (0~255)

g. Horizontal Shift (0~255)

h. Vertical Shift (0~63)

i. Fine Tune (0~31)

B. Audio Adjust：

a. Volume (0~100)

b. Bass (0~100)

c. Treble (0~100)

d. Balance (-50~+50)

e. Surround (ON/OFF)

f. Speakers (ON/OFF)

C. Special Features：

a. Language (English/Français/Espaňol)

b. Sleep Timer (OFF/30Min/60Min/90Min/120Min)

c. PIP Position (TL/TC/TR/ML/MR/BL/BC/BR)

d. Rest All Settings

AV / SV / COMPONENT MODE

A. Picture Adjust：

a. Picture Mode (Standard/Movie /Game /Custom)

b. Backlight (0~100)

c. Contrast (0~100)

d. Brightness (0~100)

e. Color (saturation) (0~100)

f. Tint (hue) (-50~+50)

g. Sharpness (0~7)

h. Color Temperature (Cool/Normal/Warm/Custom)

i. Advanced Picture Adjust

B. Audio Adjust：

a. Volume (0~100)

b. Bass (0~100)

c. Treble (0~100)

d. Balance (-50~+50)

e. Surround (ON/OFF)

f. Speakers (ON/OFF)

C. Special Features：

a. Language (English/Français/Espaňol)

b. Sleep Timer (OFF/30Min/60Min/90Min/120Min)

c. Analog CC (OFF/CC1~4/TT1~4)

d. PIP Position (TL/TC/TR/ML/MR/BL/BC/BR)

e. Rest All Settings

D. Parental Control：

a. Parental Lock Enable (ON/OFF)

b. TV Rating

c. Move Rating

d. Block Unrated TV (NO/YES)

e. Access Code Edit

HDMI MODE：

A. Picture Adjust：

a. Picture Mode (Standard/Movie /Game /Custom)

b. Backlight (0~100)

c. Contrast (0~100)

d. Brightness (0~100)

e. Color (saturation) (0~100)

f. Tint (hue) (-50~+50)

g. Sharpness (0~7)

h. Color Temperature (Cool/Normal/Warm/Custom)

i. Advanced Picture Adjust

B. Audio Adjust：

a. Volume (0~100)

b. Bass (0~100)

c. Treble (0~100)

d. Balance (0~100)

e. Surround (ON/OFF)

f. Speakers (ON/OFF)

C. Special Features：

a. Language (English/Français/Espaňol)

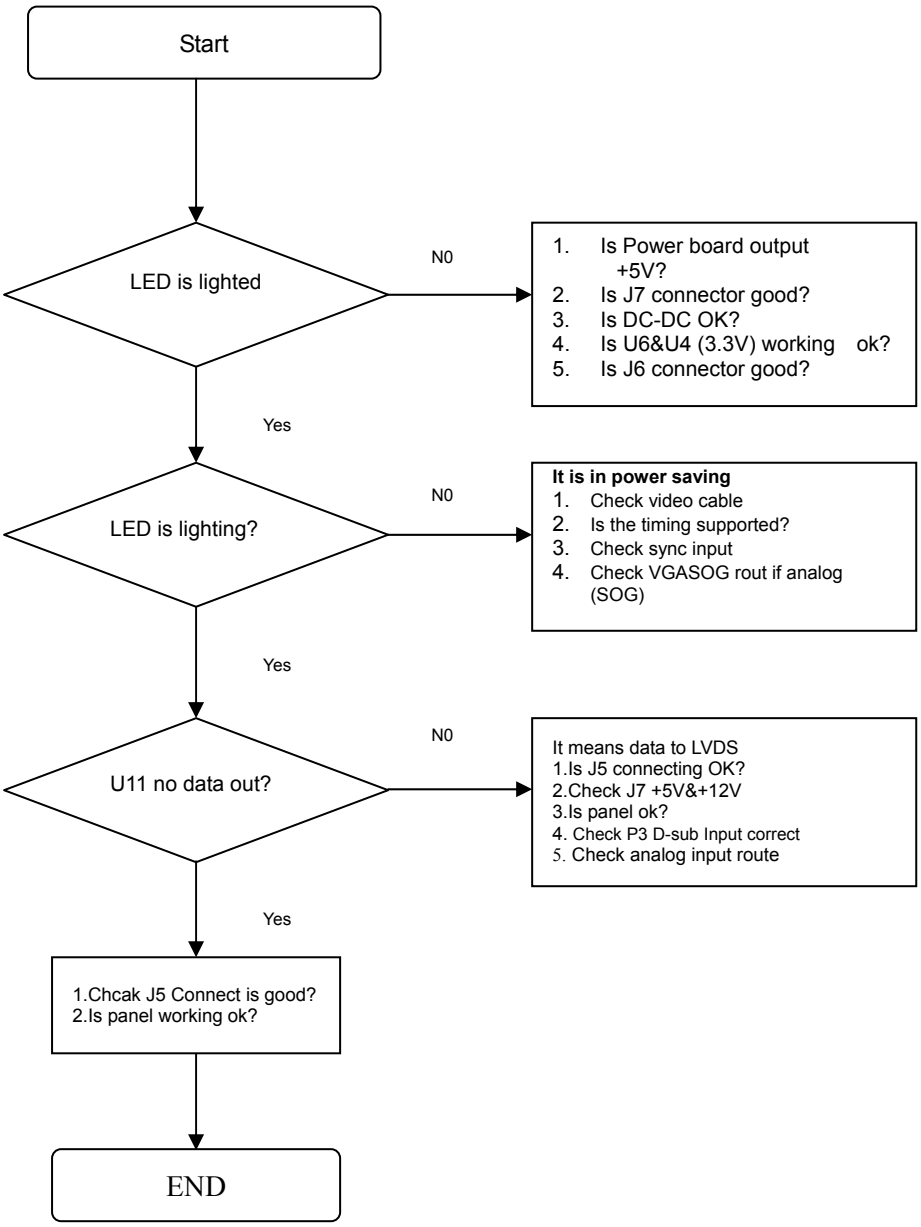
b. Sleep Timer (OFF/30Min/60Min/90Min/120Min)

c. PIP Position (TL/TC/TR/ML/MR/BL/BC/BR)

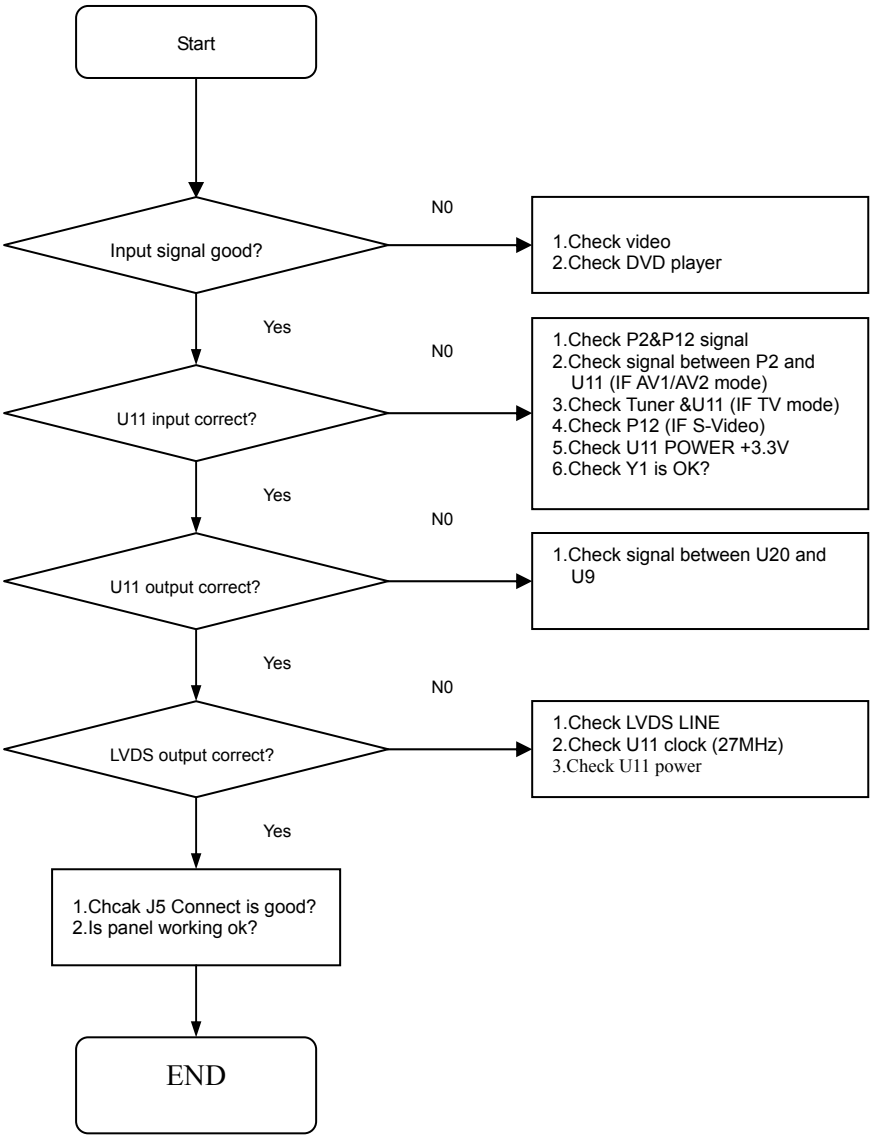
d. Rest All Settings

Chapter 9 Trouble shooting

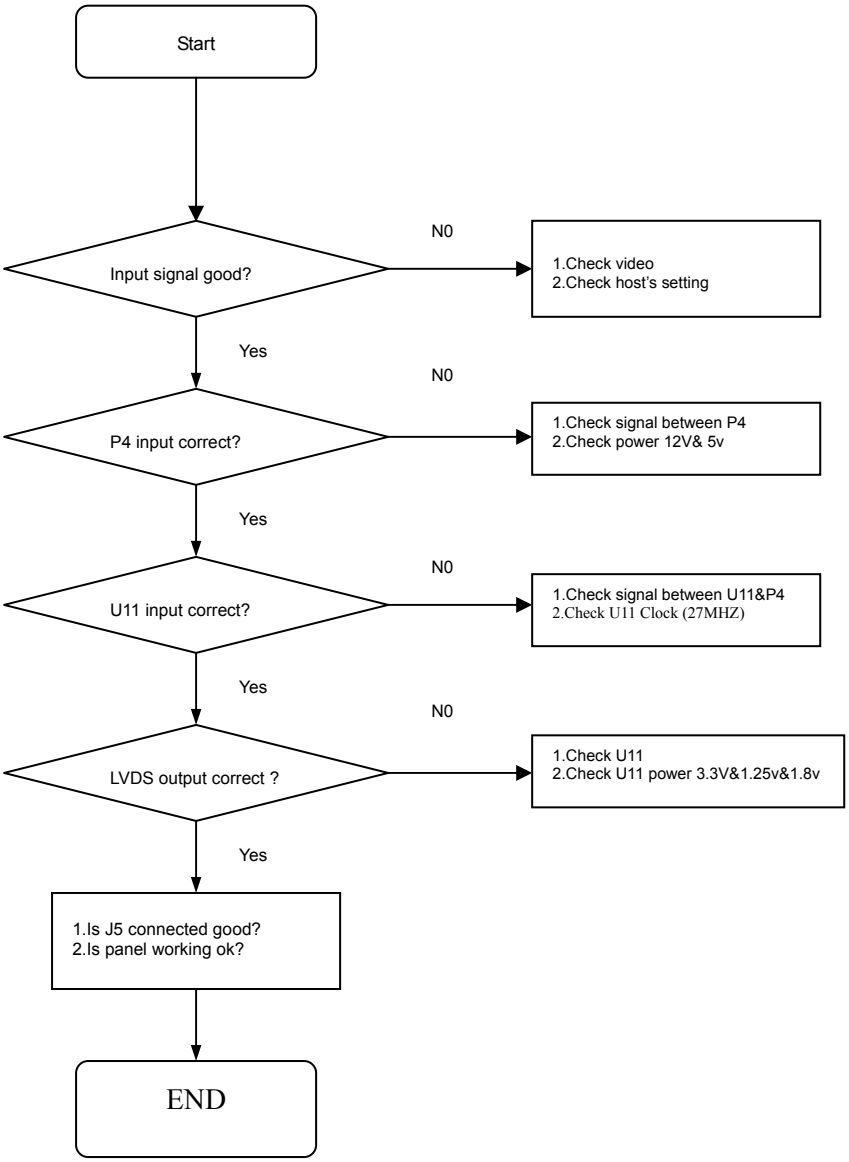
MONITOR DISPLAY NOTHING (PC MODE)



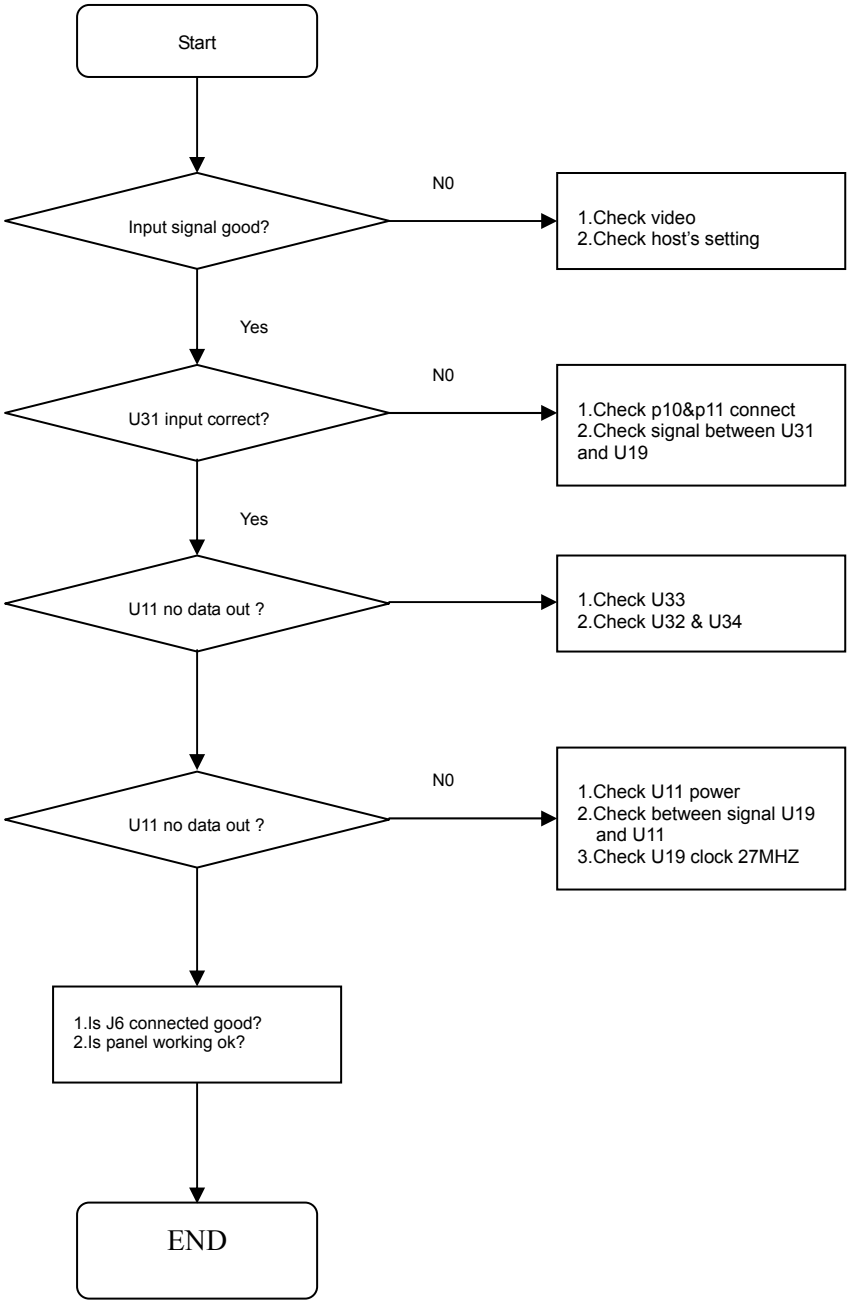
(TV, COMPOSITE VIDEO1, 2, S-VIDEO) IS NOT DISPLAY CORRECTLY



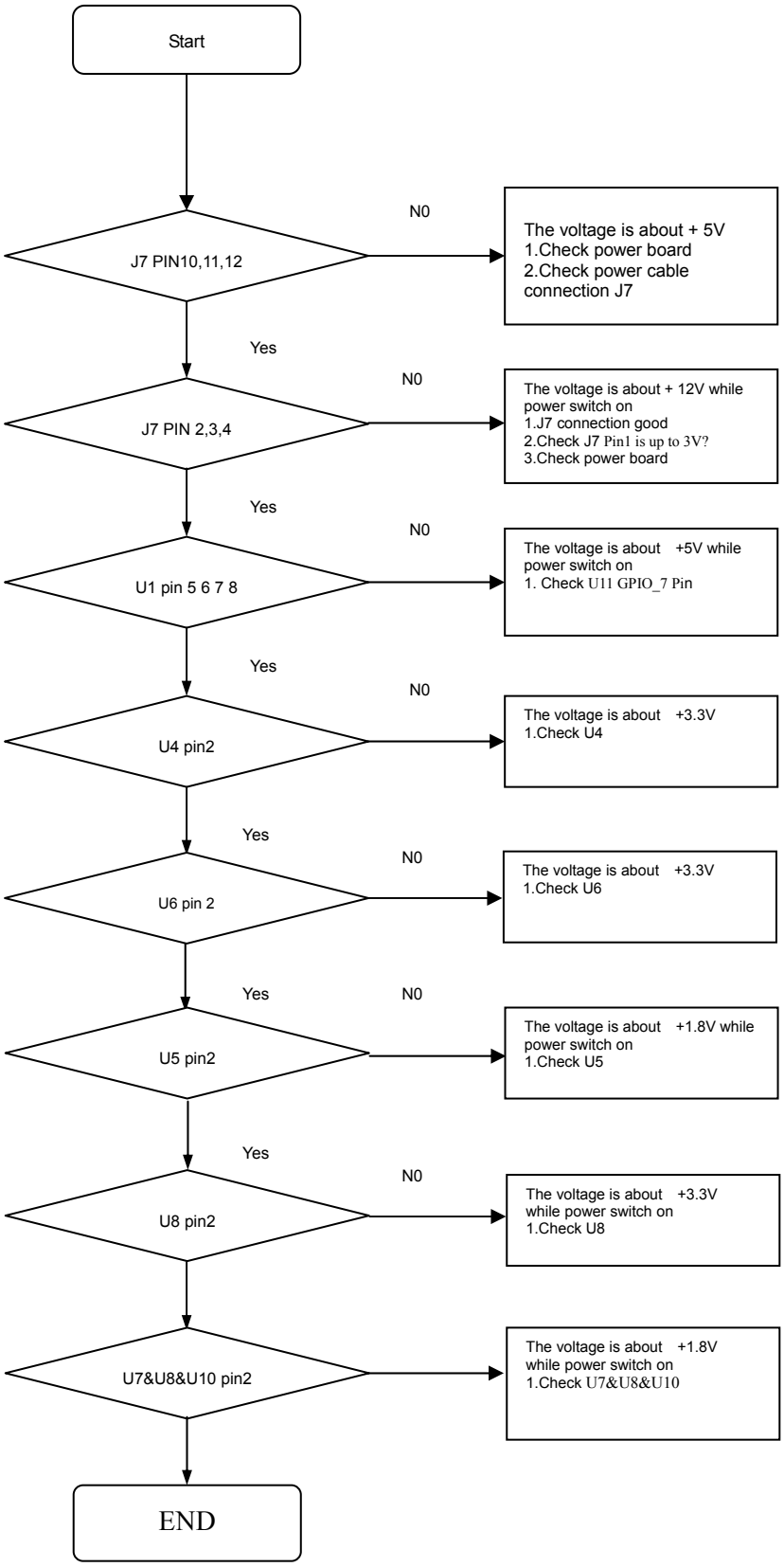
(COMPONENT1, 2) IS NOT DISPLAY CORRECTLY



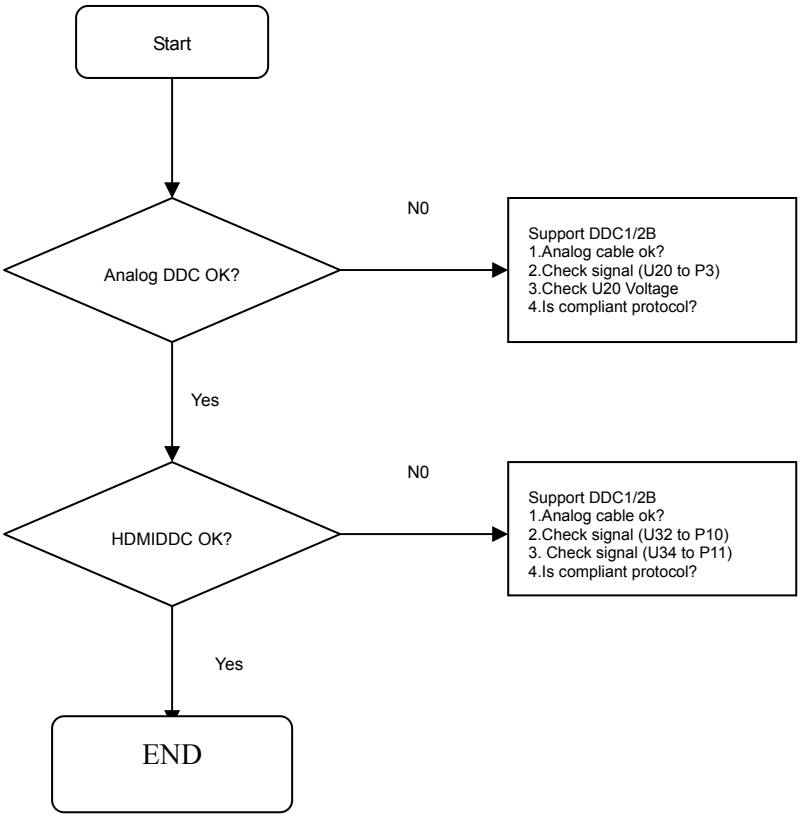
(HDMI) IS NOT DISPLAY CORRECTLY



TROUBLE OF DC-DC CONVERTER



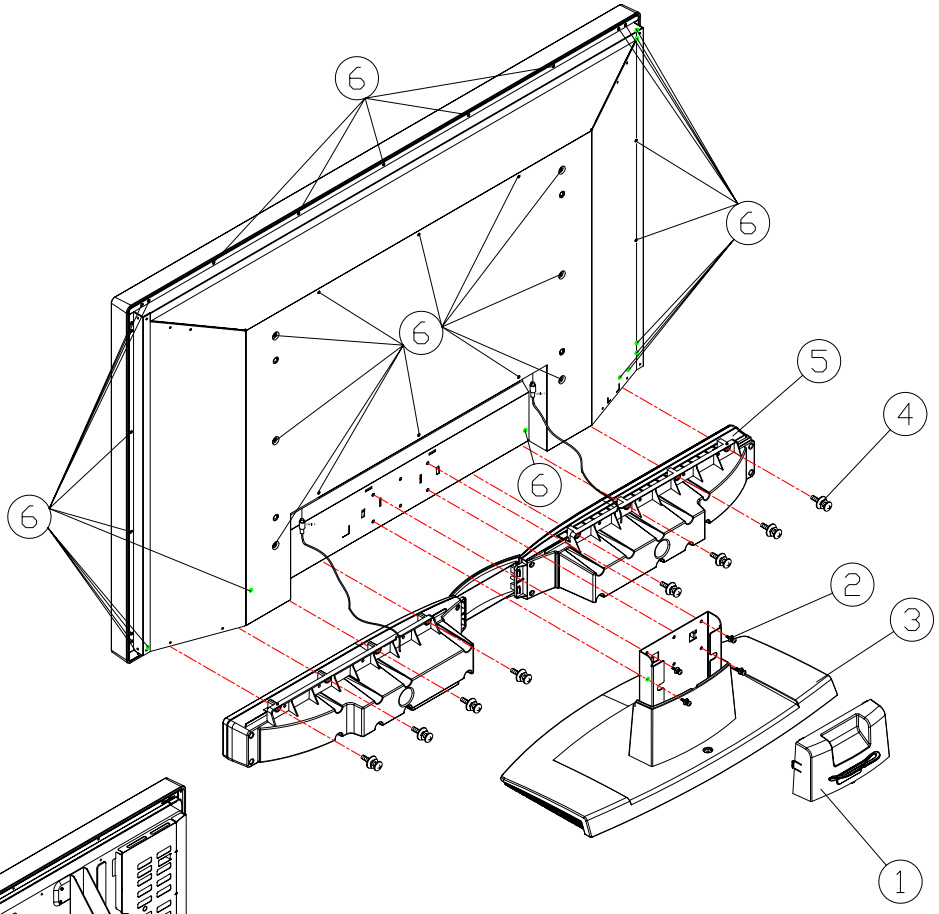
TROUBLE OF DDC READING

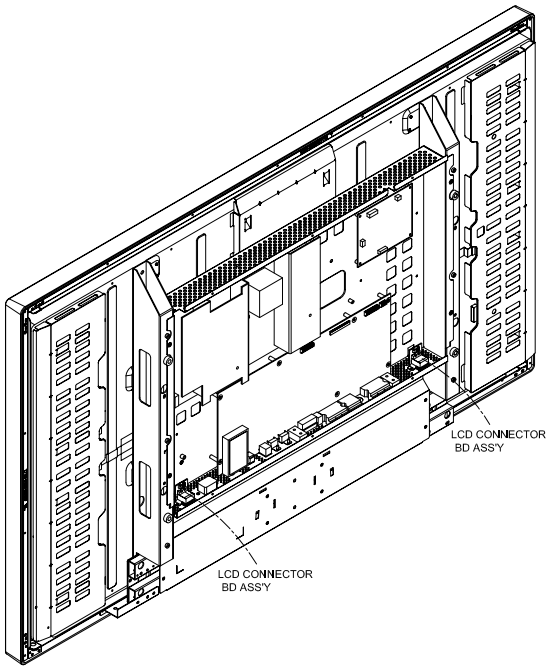


1.REAR COVER ASS'Y /CONNECTOR BD ASS'Y REMOVAL

Note:Spread a mat underneath to avoid damaging the HDTV surface.

1) Separate the base cover ①.
2) Remove four screws ③from Base Ass'y ② .
2) Separate the Base Ass'y ②.
4) Remove the cable1/cable2 from rear cover.
3) Remove eight screws ④from Acoustic Right/Left BOXES Ass'y ⑤.
4) Separate the Acoustic Right/Left BOXES Ass'y ⑤.
5) Remove thirty-nine screws ⑥from rear cover.
8) Separate tne rear cover.



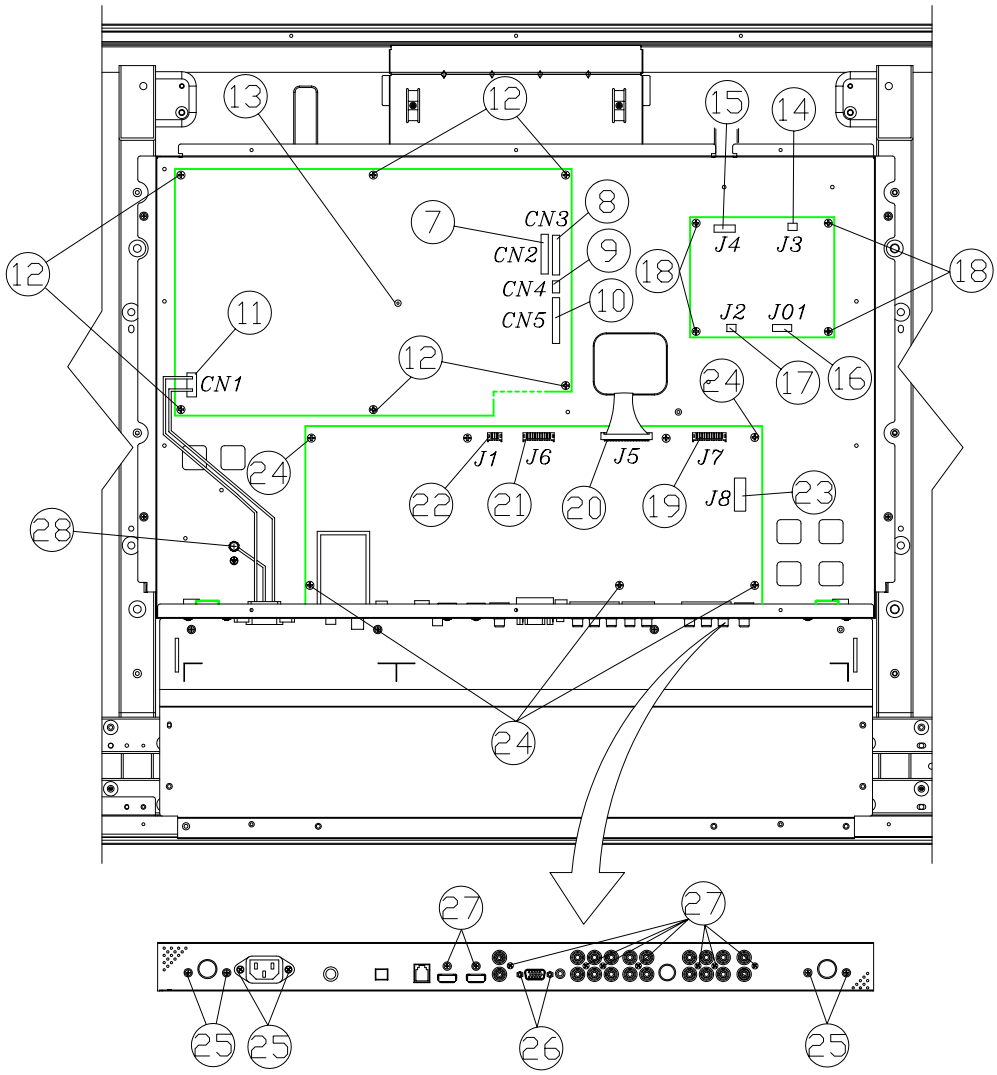


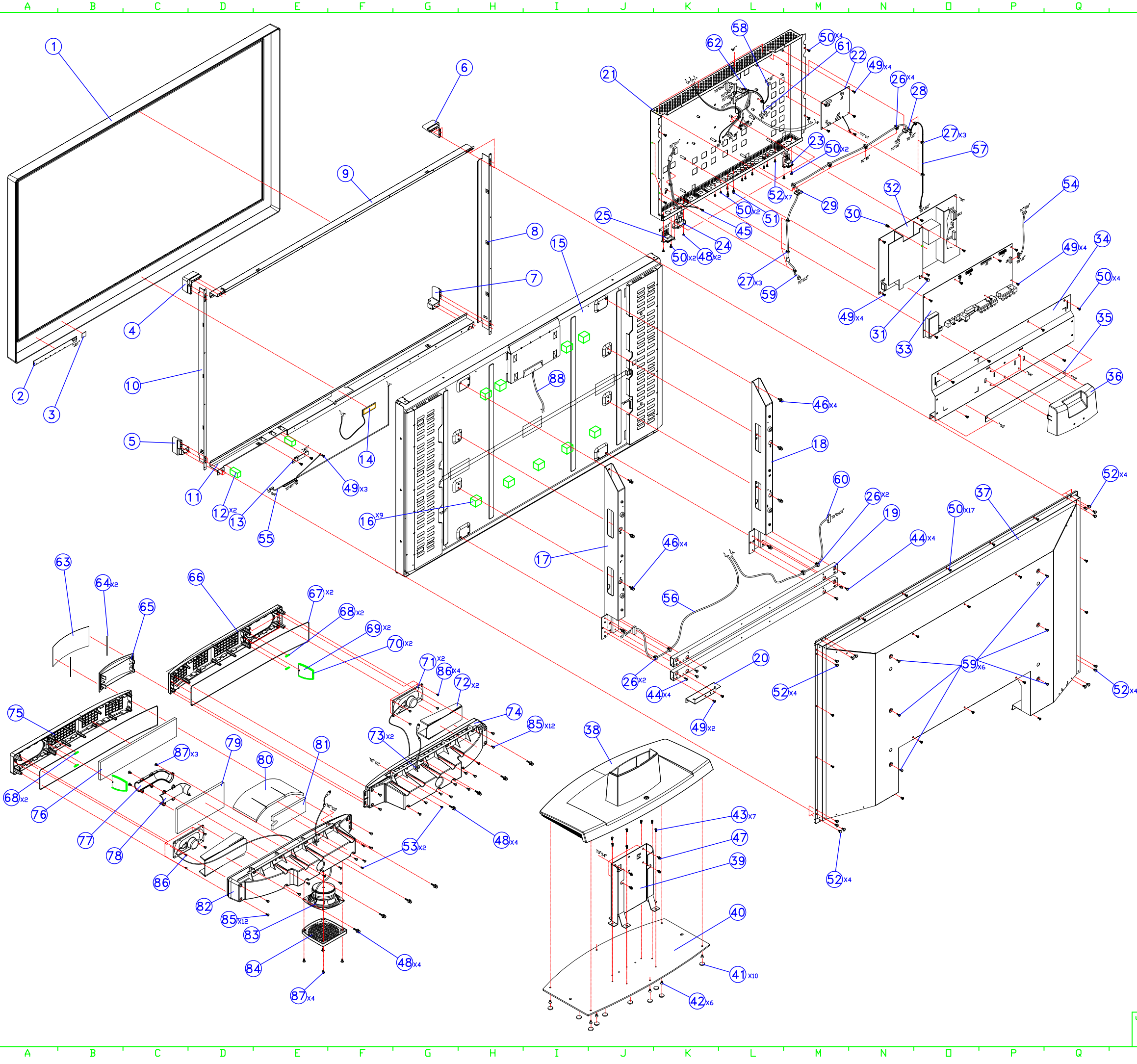
2. POWER BD ASS'Y/AUDIO BD ASS'Y REMOVAL

1) Remove the connector ⑦ ⑧ (CN2)(CN3) of the inverter cable.
2) Remove the connector ⑨ (CN4) of the Audio cable.
3) Remove the connector ⑩ (CN5) of the Main cable.
4) Remove six screws ⑫ from Power BD ASS'Y .
5) Remove the connector ⑪ (CN1) of the Power cable.
6) Remove the spacer support ⑬.
7) Separate the Power BD ASS'Y .
8) Remove the connector ⑭ (J3) ⑮ (J4) of the connector cable.
9) Remove the connector ⑯ (J01) of the Main cable.
10) Remove the connector ⑰ (J2) of the Power cable
11) Remove four screws ⑱ from Audio BD Ass'y.
12) Separate the Audio BD Ass'y .

3. MAIN BD ASS'Y /LED CONNECTOR BD R/L ASS'Y REMOVAL

1) Remove the connector ㉒ (J1) of the Backlight cable.
2) Remove the connector ⑳ (J5) of the LVDS cable.
3) Remove the connector ㉑ (J6) of the Keypad cable.
4) Remove the connector ⑲ (J7) of the Power BD cable.
5) Remove the connector ㉓ (J8) of the Audio BD cable.
6) Remove seven screws ㉔ from MAIN BD Ass'y.
7) Remove six screws ㉕,two screws hexagon ㉖,nine screw ㉗ and one screw ㉘ from PCB support.
8) Separate the MAIN BD Ass'Y,AC Inlet and LED connector BD R/L Ass'y.





ITEM		DESCRIPTION	QTY
1		FRONT BEZEL (GV47L)(PC,TRANSPARENCY+BLACK) ASS'Y	1
2		DISPLAY BD ASS'Y GV47L FHDTV10A	1
3		IR Filter (GV47L)	1
4		PANEL BKT SUPPORT TL (GV47L)(ABS, GRAY) ASS'Y	1
5		PANEL BKT SUPPORT BL (GV47L)(ABS, GRAY) ASS'Y	1
6		PANEL BKT SUPPORT TR (GV47L)(ABS, GRAY) ASS'Y	1
7		PANEL BKT SUPPORT BR (GV47L)(ABS, GRAY) ASS'Y	1
8		PANEL BKT VR (GV47L)(SECC T=1.0mm)	1
9		PANEL BKT T (GV47L)(SECC T=1.0mm)	1
10		PANEL BKT VL (GV47L)(SECC T=1.0mm)	1
11		PANEL BKT B (GV47L)(SECC T=1.0mm)	1
12		Function PCB Stuffing(GV47L)	2
13		IR BD ASS'Y GV42L HDTV	1
14		LED BACKLIGHT 18*50 LYSB-4916W/SY 580mm	1
15		LCD MODULE 47.0'' TFT LC470WU01-SLC1 (LG.PHILIPS)	1
16		GASKET BLOCK (30.0L*25.0W*25.0H)	9
17		PANEL BKT L (GV47L)(SGCC T=1.6mm)	1
18		PANEL BKT R (GV47L)(SGCC T=1.6mm)	1
19		BASE SUPPORT (GV47L)(SGCC T=1.6mm)	2
20		PANEL BKT B_SUPPORT (GV47L)(SECC T=1.0mm)	1
21		PCB SUPPORT (GV47L)(SECC T=0.8mm)	1
22		AUDIO BD ASS'Y GV47L FHDTV10A	1
23		LCD CONNECTOR BD ASS'Y (GV42L)	1
24		AC INLET +VHRSP 1617#22 250mm 1015#18 80mm	1
25		LCD CONNECTOR BD ASS'Y (GV46L)	1
26		WIRE SADDLE (CH-02)	8
27		WIRE SADDLE (CH-01P)	9
28		EDGE SADDLE DS-12 (NYLON)	1
29		EDGE SADDLE DS-10	1
30		SPACER SUPPORT (TCL-07)	2
31		CANDE CLIP (MB-05A)(GV47L)	1
32		POWER BD ASS'Y DPS-475AP L-F	1
33		MAC. SCREW-MRF M3.0*6.0L, BLK-Ni	33
34		IO BKT (GV47L)(SGCC T=0.8mm)	1
35		MYLAR 341*22*0.4mm (GV47L)	1
36		BASE COVER (GV47L)(ABS, SILVER)	1
37		REAR COVER (GV47L)(SGCC T=0.8mm)	1
38		BASE (GV46L HDTV10A)(HIPS)	1
39		BASE FRAME R (GV47L)(SGHC T=1.6mm)	1
40		BASE PLATE (GV47L)(SPHC T=4.0mm)	1
41		BASE FOOT (ø 18.0*2.0t, PORON)	10
42		TAP.SCREW-TR #4.0*15.0L,Ni	6
43		MAC. SCREW-MP M5.0*6.0L,BLK-Ni	7
44		MAC. SCREW-MB(point) M4.0*8.0L_,BLK-Ni	14
45		MAC. SCREW-MPGW M4.0*8.0L,Ni	1
46		MAC. SCREW-MPSWF M4.0*8.0L,NI	8
47		MAC. SCREW-MPSWF(Point) M4.0*12.0L,Ni	4
48		MAC.SCREW-MPSFW M4.0*25.0L,BLK-Ni	8
49		MAC. SCREW-MF M3.0*8.0L,BLK-Ni	2
50		MAC. SCREW-MRF M3.0*6.0L,Zn(L27-CBJ)	23
51		MAC. SCREW-MRF M3.0*6.0L, BLK-Ni	33
52		MAC. SCREW-MHSW #4-40*8.0L,Ni	2
53		TAP. SCREW-TB #3.0*8.0L,BLK-Ni	23
54		WH P24267-P24266 1007#26 150mm	1
55		WH A2001-8P-A2001-4P+A1251-8P 2464#28 880/780mm	1
56		WH A2001H02-14P/A2543H00-13P 1007#24 900mm	1
57		WH A2501-2P-A2501-2P 1007#22 450mm	1
58		WH A2501-4P-A2543-4P 1007#22 300mm +CORE	1
59		WH A2501-6P-A2501-6P 1007#22 920mm+CORE+TUBE	1
60		WH A2543H00-13P/A2001H02-12P 1007#24 900mm	1
61		WH A2543H00-15P/A2001H02-15P 1007#26 280mm+CORE	1
62		WIRE SADDLE (CH-14)	1
63		AL PLATE_1 (GV46L HDTV)	1
64		AL PLATE STUFFING (GV46L HDTV)	2
65		AL PLATE SUPPORT (GV46L)(ABS HB)	1
66		SPEAKER FRONT COVER_L (GV42/46)(ABS HB)	1
67		RUBBER SEAL(GV42L/GV46L HDTV)	1
68		WOOFER BLOCK SEAL (GV42L/GV46L HDTV)	2
69		WOOFER ISOLATED SHEET (GV42/46)(ABS HB)	1
70		WOOFER ISOLATED SHEET SEAL (GV42L/GV46L HDTV)	1
71		SPEAKER ASS'Y 8OHM 10W	1
72		2X5 SPEAKER STUFFING	1
73		SPAKER CABLE SEAL(4.5mm/Pantone 430C)	1
74		SPEAKER REAR COVER_L	1
75		SPEAKER FRONT COVER_R	1
76		FRONT COVER STUFFING	1
77		DUCT TOP COVER	1
78		DUCT BOTTOM COVER	1
79		DUCT STUFFING	1
80		WOOFER ENCLOSURE STUFFING	1
81		REAR STUFFING	1
82		SPEAKER REAR COVER_R	1
83		SPEAKER 8OHM 20W K(102-10)FL-1-C-PF L-F	1
84		WOOFER COVER	1
85		TAP. SCREW-TB #3.0*14.0L,NI	24
86		TAP. SCREW-TB #4.0*8.0L, BLK-NI	8
87		TAP. SCREW-TP #4.0*10.0L,NI	7
88		WH FI-RE51HL-P240430 20276#30 330mm+CORE	1

VIZIO GV47 HDTV			2647-8500-1059
DESCRIPTION			PART NO.
AmTRAN TECHNOLOGY Co., LTD.	THIRD ANGLE PROJECTION	MODEL No.:	VIZIO GV47 HDTV
UNLESS OTHERWISE NOTED: XX = ±0.10, X = ±0.2, ANG. = ±1/2°	DSN: Jessie Yu 95/12/29	MATERIAL: ******	DWG. NAME: 47" CASE ASS'Y
	CHK:	QTY: 1 SIZE: A1	
		SCALE: Full UNIT: MM	DWG. No.: MMC CV47L 8647-8500-1059 REV. 0 SHEET: 1 of 1